Horticultural Society

MASSACHUSETTS PLOUGHMAN

DEVOTED TO AGRICULTURE, HORTICULTURE, THE FARM, THE GARDEN.

AND NEW ENGLAND JOURNAL OF AGRICULTURE.

THE FIRESIDE, RURAL LIFE, LITERATURE, USEFUL ARTS, NEWS, &c.

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Editorial.

QUARTER CENTENNIAL REPORT OF SECRETARY FLINT.

The Secretary of the Mass. State Board of Agriculture has just submitted his Twenty-fifty Annual Report to the Legislature, and it is a portly volume of somewhat over 600 pages, made so partly by an elaborate General Index of nearly a hundred pages of the whole series, from 1853 to the present time. This Index will add immensely to the value of the present and the previous Reports, by making the great stores of information, in scientific lectures, practical discussions by the most intelligent farmers, and papers full of thought and teeming with instruction, easily and quickly available to the searcher after truth and guidance in the ceaseless round of work on the farm.

There are something like two or three thousands sets of these Reports distributed over this State, in public libraries, and in the hands of individuals who have carefully studied and read them and who use them as a constant guide and *vade mecum* in their daily life on the farm, and to these, this General Index will be of invaluable service. A book without an index is a pretty poor piece of property. It is about as useless as a boat without a rudder. Of the two, the body of a book and a complete index, give us the latter in preference. In the hurry of investigation, when time is pressing, it is unspeakably disgusting to take up a book that we feel sure must settle some doubtful point and find that it has no index. There is no time to wade through fifty or a hundred pages, it may be, to find a fact, or a subject, and the book is thrown aside, even though we feel pretty certain that it must, somewhere, contain the very information of which we are in so much need. We hold that no author has a right to send forth any work upon practical or scientific subjects, or anything but a trashy novel that is'nt worth the trouble of indexing or spending much valuable time over, without a guide to its more important contents. A mere table of contents doesn't meet the case. It is, perhaps, a little better than nothing. It is an apology for an unpardonable neglect, and serves to ease the conscience of a lazy writer, but it is not at all to be compared with a complete and comprehensive index.

Whether the Secretary has succeeded in furnishing us with such an index as this valuable series deserves, we are hardly prepared, as yet, to say. It is no easy matter to do justice, in any reasonable space, to so vast and so varied an amount of material as the twenty-five elaborate Reports contain. Mistakes of omission and of commission must, of course, occur, in such an undertaking, and perfection can hardly be expected. Without, therefore, criticising anything that may appear like shortcoming, we always prefer to give credit to an earnest endeavor to do a good thing, and to benefit the very large body of busy students in agriculture, who, we are sure, will feel, if they do not express, a sense of gratitude and thankfulness that the Index has been append d as the fitting close of this second series of Reports upon the Agriculture of Massachusetts. As for the other parts of the volume, it seems sufficient to allude to the variety and the high scientific character of the lectures and papers, both at the public meeting at Waltham and at the business meeting of the Board in the early part of last month. If there was anything that could properly be called "bosh" in the work upon either occasion, it has, for the most part, been excluded in this permanent record. From the first to the last of the report of the public meeting, there appears not only a high finish in the style, but an earnest purpose to accomplish the object, that is to instruct, to awaken enthusiasm, and to entertain at the same time. We notice but little that appears to have been said for the sake of the mere sound. There is a plainness, a directness of aim and method, which of itself indicates the power to accomplish the object.

Mr. Philbrick's paper upon Garden Farming or Market Gardening, is thoroughly practical, plain, comprehensive and full of instruction. President Chadbourne's admirable lecture upon the Origin and Development of Cultivated Plants was not only eloquent and popular at the time, delighting everybody who had the good fortune to listen to it, but it reads well, as they say, and is as full of thought and inspiration as a nut is of meat.

After Mr. Russell's admirable lecture on the Breeding, Training and Management of the Horse, Dr. Hunt very truly said "it would not be possible to put thought into more elegant language than we have had it here." It was a downright good lecture, the best, we think, that we ever heard upon the Horse, full of practical thought and suggestion, interesting, almost fascinating from beginning to end, and it was followed by a most valuable discussion on the best methods and principles of shoeing horses, which ought to make itself felt in every blacksmith's shop in Massachusetts, as we have no doubt it will.

We wish there were time and space to allude in detail to the many other strong features of this Report, to the Secretary's plain talk on the Grass and Hay Crop, and especially to the most interesting lecture of Prof. Goodale on Hybridization of Plants, and to Prof. W. G. Farlow's lecture on the Diseases of Fruit-bearing Plants, the fungi, and the mildews and the blights that threaten our gardens and our orchards. Prof. Farlow is the highest authority in this country on that class of subjects and no mere allusion to the very great value of this lecture would do it any kind of justice. It is to be read and studied to be appreciated as it deserves to be.

There is a very capital prize paper on the Army Worm, by Prof. C. V. Riley, and a very interesting and suggestive one entitled Notes on Tree Planting, by Prof. Sargent. Prof. Goessmann continues his investigations on the Diking and Reclaiming of Salt Marshes, while his Fifth Report on Fertilizers is fully up in value to the preceding reports, and one of the best on the subject that has ever appeared in this country.

On the whole the Report gives abundant evidence of earnest, patient and faithful labor on the part of the Board and the Secretary, who, as Col. Wilder says on p. 262, "entered upon his duties as Secretary of the Board in February, 1853, which office he has filled with signal ability and fidelity for a quarter of a century, and with honor to the Commonwealth, having fully justified the unqualified indorsement of Hon. Edward Everett, President of Harvard College, at the time of his graduation, who earnestly recommended him for election." It is not probable that everybody would agree with Edward Everett; in fact, we never fully agreed with him ourselves, but then we never professed to have the light that he had, and that makes all the difference in the world.

It is unfortunate that this Report will not come within the reach of so large a mass of people as the previous Reports, on account of the action of the last Legislature.

The Legislature of 1877 provided that the Report of the Secretary of the State Board of Agriculture, like other documents, should be sold under the direction of the Secretary of the Commonwealth at "*not less than half the cost.*"

If any parties wish for copies, it will be necessary to send *immediately* by their representative, express, post-office order, or otherwise, to Hon. H. B. Pierce, Secretary of the Commonwealth, the sum of fifty-five cents for each copy desired, when the number of copies for which the money is received will be forwarded without delay as directed. The number of copies printed is so limited that prompt application will be required to secure it.

The postage on it is twenty-one cents, which must be added to the above if the volume is to be sent by mail. Secretary Flint has none for distribution this year.

TREE CULTURE.

Editor Massachusetts Ploughman:

I am a firm believer in the all important matter of "Tree Culture." Much, but not half enough, is being said about it; but in connection with this subject the strange fact appears that although so much is said about it, nothing is said about *planting* the seeds or cones. I have planted them and none came up. I suppose I planted too deep or too shallow. Now, you know that outside of cities the evergreen is very numerous, and at almost every house there is space or waste ground to plant these seeds, and by so doing is the *first* step to a general planting of *trees*, for if one sees a quantity of young pines, spruces, &c. coming forward of his own planting, he will be more likely to set them out than he will to go into cities and buy the young tree. G. F.

Watertown, Mass., March 3, 1878.

TREATMENT OF A WORN-OUT MEADOW.

Arba Campbell, of Oswego, N. Y., in a letter to the Elmira Farmer's Club, writes:

As to the best plan of ploughing, fertilizing and re-seeding an old worn out meadow. Last fall I ploughed a meadow of ten acres that had been mown and after-fed for many years, till it did not produce half a ton of hay to the acre. Early in the spring I sowed ten bushels of slaked lime to the acre and worked it in with a cultivator. I then sowed 200 pounds of superphosphate to the acre, and 10 bushels of oats, sowing the oats thin to give the grass seed a better chance after harrowing. I sowed twelve quarts of timothy and four quarts of clover seed, and cross harrowed. The oats came up and produced a rapid growth, standing fully three feet high, and the one acre which we let get ripe, threshed forty-four bushels. The other nine acres we cut with a mower just as a few of the heads began to turn yellow; when dry we raked them up and put them in as hay. As a fodder crop they are worth more than all the hay grown in the same meadow for the three previous years. And as I sell no grain but wheat, except in the form of butter, pork, beef and butter, we have found this the cheapest and most profitable way of using our oat crop. For horses and sheep I know of no better fodder. Our grass seed took beautifully, and we have now a stand of timothy and clover thickly set and fully six inches high, with every prospect of a good crop of hay the coming year. I will recommend Mr. Johnson to try the same experiment on his soil and report the result. My soil is a gravelly loam inclining to clay, with little or no sand in it. I have found but little benefit in ploughing and reseeding old exhausted meadows without using some fertilizers, not only to get the seed to catch, but to supply the wants of the grass in its future growth. And I wish here to say that in buying my timothy seed I always buy that which is not hulled in threshing; but which are seed will grow I doubt not under favorable circumstances, but that which is not hulled will grow under less favorable circumstances, and I think it much cheaper to buy though costing a little more.

THE AGRICULTURAL SCHOOLS IN EUROPE.

The agricultural schools for improvement, which were established on trial in Nassau, Germany, some ten years ago, appear to have been a great success. In the winter of 1869 only nine schools were in existence, in 1870 the number had increased to ten, in 1871 to forty-two, in 1874 to ninety-one, and in 1876-7 to ninety-two. Last winter these schools were attended by 1,457 pupils, of whom 1,230 were between fourteen and twenty years of age, ninety-four between twenty and thirty, and thirty-three more than thirty years old. The teachers are paid according to results, which are tested by periodical examinations made by appointed inspectors. This statement is the more interesting when it is considered that Nassau has an area of only 200 to 300 square miles in excess of that of the State of Rhode Island, while her population numbers about 500,000.

☞ We often hear that such and such a one is a good farmer. How is good farming to be tested? Certainly not by the raising of one or two good crops. He is the good farmer who uniformly increases the aggregate product of his farm from year to year. The surest, truest test of good farming is, a constantly increasing production of the soil. —*The Husbandman.*

Questions & Answers.

COAL ASHES.

Editor Massachusetts Ploughman:

I would like to inquire through the *Ploughman* if coal ashes are a benefit to light soil, and if so what is the best way to use them, and oblige A SUBSCRIBER.

Hadley, March 11, 1878.

They are of but very slight value anyway, unless, as is sometimes the case, a good deal of wood is burned with them. They are worth more for garden walks and for roads.—[ED.

"INJURY TO THE MILK DUCT."

Editor Massachusetts Ploughman:

Noticing an article in the *Ploughman* from H. G. W., of Fayville, in relation to a defective cow owned by him, I thought possibly I might enlighten him somewhat on the subject. The trouble of the cow, in all probability, is a "Stricture," or contraction of the muscles. I have had many cases of this kind, and have treated them in as many different ways, and as yet, have found nothing that would effect a cure, except cutting. The cause of the case above referred to, might be injury to the teat before calving, or by humor settling in the point of the teat, and thus causing unnatural heat and contraction. In this case, cutting should at once be resorted to, and will, in most cases, effect a cure. A nice little instrument for cutting a "Stricture of the Teat," can be obtained of Codman & Shurtleff, Tremont Street, Boston, which any person can operate, no matter how unskilled in such matters he may be. It is furnished with a leader, which very much resembles a milking tube, and then follows a sword-like blade of the desired width, making a clean cut on both sides. The blade being covered with a slide or guard, the operator can make a small or as large a puncture as he wishes with perfect safety. T. O. W. H.

Cliftondale, Mass.

TOWN ROADS.

Editor Massachusetts Ploughman:

We have not only taken but have been constant readers of the *Ploughman* for more than thirty-five years, and have often seen articles relating both to farms and roads. The honorable independent view taken in questions of right and wrong, makes us very anxious to know your opinion of our business. We once had a town road running through our farm, and directly in front of our house. The town some years ago discontinued the road against father's wish, (he opposing it in town meeting) without giving any other road, or paying any damage; our whole farm with two houses, is entirely shut off of a town road, and our farm has for several years been very much injured by animals left loose in this discontinued road. We have asked for the protection of the town laws, but are told that as the road is discontinued, they can do nothing for us. Has the town power to take from any one their right to a town road, denying to them the protection and privileges which that road affords? Is it not violating the laws of the Constitution to deprive a person of the rights they once enjoyed? If the town has discontinued a road, and refused to protect the property that was once protected by that road, can they compel that person to pay a tax to protect other's property, leaving their own entirely unprotected?

We have an ancient record of the road, which says that it was laid out in 1724, (fourteen years before Waltham was incorporated as a town) by the selectmen of Watertown as a highway; not only the road was made, but our house was built, long before there was this town of Waltham, and can it rob this house and farm of their right to a road that belonged to them fourteen years before that town had an existence? I cannot believe the laws of the Constitution would allow it. We have been told by a Waltham lawyer that justice is on our side, but not the law. We hope there are lawyers who are able to interpret the law in a way to maintain justice, recognizing the Divine law unto which all human laws must eventually bow. If you, Mr. Editor, or any of the readers of the *Ploughman*, will give us any information on the subject, either for, or against us, we would be truly obliged.

Very respectfully, M. H.

Waltham, March 20, 1878.

PREGNANT ANIMALS FOR FOOD.

The *Drover's Journal*, of Chicago, says on the above subject, in its last issue:

A marked feature of the sheep trade here of late has been the large number of pregnant ewes for sale. And where the blame for sending in animals in pregnant condition should be placed it is not easy to say. Shippers tell us that if they wish to buy a farmer's flock they find it almost impossible to do so without taking many animals unfit for mutton, including old rams and "lambs" ewes. Circumstances seem to justify the belief that it is the honest farmer who is in fault. In his eagerness to turn an honest penny, out of another man's pocket into his own, the former purposely allows the ewes which he intends to sell, to become pregnant, and tries to manage matters so as to put the sheep into market when they are well advanced toward parturition and yet not so heavy as to show very plainly their real condition. They hope by this means to get more money for their ewes than they could otherwise obtain, under the impression that the lamb the ewe carries adds more to her weight than she would gain if not pregnant. It may be that in some cases they succeed by this means in swindling the buyer, but we cannot believe that the farmer gains anything by the operation.

Any one acquainted with the market knows that no buyer will give as much for pregnant animals as he will for those which are "straight." Under the present system of forcing the whole lot upon the purchaser, instead of permitting him to select such as he wants, these pregnant ewes lower the price of the better animals of the lot.

Some years ago this matter of killing pregnant animals was agitated in New York, and the passage of an ordinance was secured under which all such animals were condemned by the officers of the city. Something of the kind is greatly needed in Chicago. It is true this would first affect the butchers, but not a day would pass after they found that the law would be strictly enforced before they would refuse absolutely to buy a pregnant animal. This would speedily cure the evil complained of, for the shipper from the country would be sure to not allow himself to be caught more than once with a lot of unsalable stock on his hands.

☞ The *North British Agriculturist*, in an article on the past agricultural season estimates the losses of Scotch farmers, owing to inferior crops, at $10,000,000.

Correspondence.

RENOVATION OF WOODLANDS.

Editor Massachusetts Ploughman:

The spring runs into the rill and into the stream, into the river to the sea, to circle the tropical expanse, to be drawn up by the delicate elaboratory of nature into the realm of mists, to be directed by the swift currents of the upper air within the sweep of the tentacles of the short shrubs of tall peaks, and the sympathizing branches of the tall trees of the primeval mountain slopes. While the thickets were dense round the springs, and the forests about the sources and headwaters of famous rivers yet unviolated, it was easy to calculate almost to a day the periods of the commencement of the thaw and of the timely freshet. And the time allotted for each season trespassed little upon the territory of natural heat and cold, so that if there was a barren, frosty summer it was noted for its rarity. The winter was steady and regular, and the summers sure. The sources of small streams were first laid open to the sun, and then the valuable timber of headwaters of the main river swept off from the swamps, those natural reserved forces that were prepared to meet any drought that the severe stricture of summer heats might suck out of them. Hence, instead of cosmic order, we have drawn upon ourselves uncertain seasons. A summer of protracted droughts, when the syphon of secret suction draws down the reserved supplies of ponds and denuded swamps perhaps as much as natural evaporation, then follow long, dry falls and winters of surprising irregularity, when compared with their old normal certainty.

Our pious and unsophisticated forefathers, knowing not the law, yet industriously worked in unison with the law, while their more literate and self-asserting sons work steadily towards sapping the providential system of nature, and often knowing the law, openly violate it.

Forests not only protect the surface springs that speedily shrink and disappear when unscreened from the scorching rays of the sun, but they generate moisture and exercise a mysterious attraction over the currents of the clouds, and create counter currents, perhaps, by the fluttering of their respiratory organs. Clouds are inclined to settle down on the leeward side of a great body of forest land. A comparatively small plantation of woodland has restored a season of showers to the arid line of the Nile, and it is not impossible that an increase of shrubbery may renew the growth of the invaluable papyrus-plant. Arabia may imply by its name a land of careful culture, and it was probably bereft of its tall mountain cedars from the hostile seeds of strife that Erynnis scattered among fraternal tribes, and so turned a fertile land to a waste, and an agricultural race to nomads. A few years of warfare has made Virginia subject to perilous and ruinous floods. Perhaps clothing the exposed headlands with young plantations of choice trees might shortly stay and stop the swell and sweep of stormy streams that spring from unseasonable freshets.

FORRESTER.

THE MEASURE OF SUCCESS.

One of the chief causes of failure to prosper in business is dislike of strenuous exertion, especially when manual labor is entailed. Too many young men get the idea that because they are smart they ought to be able to live by their wits, and they shift about from pillar to post in any occupation imposing upon them what is commonly termed manual labor. This indeed is a sad mistake; desultory itenerant occupations are laborious to the body, and from their vicissitudes and uncertainty very exhausting to the mind. All men cannot, in the nature of things, learn to follow a trade or till the soil, but those who fall into those vocations will find their pursuits less onerous and more remunerative than such occupations as we consider purely intellectual. If an operative becomes a skilled workman, or the farmer becomes a thorough master of agriculture, he is a success, even though he does not attain riches; and if he permits this latter to render him discontented, it is not an evidence that his career has been a failure, but rather that he permits a morbid feeling to overshadow his achievements as an industrious and painstaking citizen. His fidelity and skill are in themselves evidences of success. It seems to be a human proclivity to wish that one's occupation had been something else, almost anything indeed but that which it actually is, and we often hear it said, "If I had my life to pass over again, I would be a so-and-so." The old adage, "Let the shoemaker stick to his last," is justified by experience, but the wisdom of the proverb remains the same, when changing two words we say, "Let the farmer stick to his plough." The advice, if followed in any vocation, will lead to success.—*Friend.*

ASHES.

Ashes are entitled to a high rank among the fertilizers which are produced on the farm and as the principal want of the majority of our farms is more fertilizing material it follows that all the ashes which are made should be carefully saved. With all the economical traits for which New England farmers are distinguished it would naturally be supposed that they would be very careful to save all the ashes made on their farms. They have read that ashes are very valuable for manure, that for certain crops (like onions and oats) they are almost a specific fertilizer, and they have often seen the good effects which almost always result from an application of ashes to the land. But in spite of all this a great many farmers who are extremely saving when money is concerned, who count every dollar before spending it even for things that are really necessary, take but very little care of their ashes. They either put ashes into barrels which stand out of doors, much of the time uncovered, so that their contents are exposed to the damaging influences of the rains or snows, or else they scatter them on the fields or on the snow, anywhere and everywhere. With these farmers the main thing seems to be to get rid of their ashes with as little trouble as possible.

Fortunately, this is not true of all, or even of a large part of our farmers. A great many farmers mean to save all their ashes and keep them in good condition. They ought to be encouraged and commended. More than ordinary praise is due to the farmer who have put up little brick buildings specially for ash receptacles. One of these little houses should be found on every farm. In one of these ashes can be kept safely. This is not always true of barrels. Fire remains in ashes much longer sometimes than it does others; and much longer than any one would expect. Sometimes the barrels in which ashes are contained are burned, and also set fire to the farm buildings.

Such cases are not as rare as they should be and too many farmers have been burned out of house and home because they carelessly put ashes from which the fire was not all out into barrels which stood too near their building. But when such a calamity as this does not result it frequently happens that the quality of the ashes for fertilizing purposes is seriously injured. The rain and snow get into the barrels and abstract some of the best fertilizing ingredients. It cannot be denied that leached ashes possess considerable value for manure. But for ordinary soils, they are not, as some farmers seem to suppose, nearly as good as those which have not been leached. No good farmer would think of leaving a barrel of Peruvian Guano exposed to the weather for several months He would know that such a course would involve a heavy loss. In a little less degree, but on the same principle will he be involved in loss by leaving ashes exposed to the weather. Fertilizers cost altogether too much and ashes are too valuable for manure to justify any farmer in allowing them to be injured by exposure or wasted by neglect.—*Dirigo Rural.*

The Poultry Interest.

THE POULTRY MANIA.

The wide-spread interest that has been shown by all classes of people in the matter of domestic fowl-culture in the past score of years, and more especially the disposition of everybody who could do so, to experiment with fowls and chickens, has proved a very healthy and useful movement thus far. It was certainly a curious novelty, at the outset, to see the people of this country and of Great Britain embark with such zeal and earnestness in what at first might appear like a comparatively trivial matter. But results have shown that it was far from being the insignificant affair that certain wiseacres pretended to believe it to be, or which certain croakers predicted would turn out an inglorious failure.

It is largely demonstrable that the excitement current on both sides of the Atlantic for years, in connection with what has been termed the poultry "mania," has been productive of a world of good to the communities of both countries. And it has long ago been proved that, while the improvement realized everywhere in the character of domestic fowls has been immensely advanced, the farmers have reaped an extended benefit all over the country, through their ability in these later days to increase their poultry products and the quality for common consumption.

If the benefits reaped by this excitement at first, and the steadier and more substantial growth of the movement subsequently had occurred only to the few fanciers and ardent amateurs who went into this work to make money suddenly and then drop out of it, there would have resulted little good to the community by this means.

But this has fortunately been but a small consideration in the business; and to-day, when the feverishness of the novelty has subsided, American farmers and poulterers are universally giving this important subject sober, careful attention, with a view to lasting and permanent profit in the future.—*Poultry World.*

FEEDING YOUNG TURKEYS.

Young turkeys should be fed at least five times daily, at morning, noon and night, and between these times, for their rapid growth requires that food be given liberally and often and of the proper kind. Milk, in its different forms, should constitute much of the first food of young turkeys. We usually give for the first few days bread soaked in new milk, at the same time giving them milk to drink. Thick milk can follow this, with an admixture of scraps of bread, after which cheese (thick milk with the whey drained off) can be given, with green onion tops chopped up fine and mixed with it. A small sprinkling of cayenne pepper is also beneficial. Some breeders recommend using hard boiled eggs, chopped up fine, for first feeds, but we do not consider this at all necessary, though it can be used if desired. When the birds are about two or three weeks old scalded corn can be sparingly mixed with the thick milk and the onion tops chopped fine, and this food will bring them along nicely. Have very shallow basins or saucers to put the drinking water or milk in, or else the young turkeys will get wet and "draggled" and may thereby lose their lives. In feeding, do not give more than the turkeys will eat up clean, for it is detrimental to their health in many ways. Feed them as much as they will eat up clean, but no more, and they will always have healthy appetites.—D. Z. EVANS, Jr., *in American Poultry Journal.*

FERTILIZERS—THE USE OF FISH CHUM.

At the Farmers' Convention at Dennysville, Maine, held a week or two since, Mr. M. L. Wilder, a former member of the Board of Agriculture, and a thoughtful and understanding farmer, made an interesting statement regarding his experiences with the use of fertilizers, from which we make the following extract:

"Fifteen or twenty years ago my farm only cut about eighteen or twenty tons of hay, and I thought it was doing pretty well at that; but I came to believe that it ought to do better, so I went to work on it gathering up all the manures I could, composts, and superphosphates and fish pomace, which I applied to my farm, and now it cuts from seventy-five to one hundred tons, the last year I think about eighty tons. I have strong faith in liquid manures. As an experiment I took some of the water from the boiler where I had been boiling herring for pomace, and put it in a hogshead and loaded the hogshead on a cart; after boring holes around the chime I drove it over a piece of grass, and was surprised at the improvement in the crop at haying time.

Now I am not sure that it would not pay every farmer in this country to build a cistern under his barn and save every drop of liquid manure and apply it to his lands as a top dressing. Of all the different kinds of fertilizers that I have tried, next to barn manure, I prefer fish pomace. I never derived any benefits from the use of superphosphates. When pomace is applied as a dressing for grain crops it should be harrowed in, so that it will become thoroughly incorporated with the soil. I prefer to keep my mowing lands in good condition by top-dressing, and all manures used for top dressing should be pulverized as fine as possible in order to obtain the most benefit from it.'

SUNFLOWER SEEDS.

A. P. Walling, Worcester, Mass., writes to the *Poultry World*: "I have tried sunflower seeds this year with good results. At first my fowls would not eat them, nor seeming to distinguish them from sticks or stones, but in a short time they learned to split open the shells and devour the kernels with a gusto, and the effect in glossing the plumage was very soon noticeable. I think the amusement of breaking the shells will turn out just the thing when my birds are cooped up in winter, as it will divert their attention from egg-eating, feather-plucking and similar mischief."

☞ How alfalfa is esteemed in California is seen by this item from the *Rural Press*; —"The advantages of raising alfalfa may be shown by a practical example. R. W. Browning has 20 acres of alfalfa. Upon 10 acres on the home place he cut an average of 10 tons to the acre, for which he received $650. He also has 10 acres of alfalfa on the Ogburn place, which netted him $1,000 clean coin off 20 acres, besides some 40 tons of hay put up for his own use.

☞ Keep stock off pastures while they are soft. The poaching will cost tenfold by summer, what the stock may get of the very early grass. There is nothing to gain but much to lose, even if only the pasture is concerned. The feed will not be lost if allowed to grow a little longer.

Written expressly for the Massachusetts Ploughman.

CHEMISTRY IN FRUIT CULTURE.

NUMBER III.

BY PROFESSOR C. A. GOESSMANN.

On the Growth and Composition of the Concord Grape.

The vines, which furnished the material for my investigation were grown upon the vineyard of the College; they had not been manured for more than six years past. The tests were confined to some prominent changes in the growth of the berries, certain alterations in the composition of their juice, and the variation in the relative quantities of their mineral or ash constituents at several important stages in the development of the grapes. The investigation was carried out in the year 1876, and the results obtained, as below reported, are designed to serve as a basis for the comparative study of the influence of special fertilizers on the productiveness of the grapevines, and the quality of the grapes grown with their assistance;—see *Ploughman* of June 17th and 24th, 1876.

The berries,—before being tested,—have in every instance been freed from their stems; and *their increase* in *organic matter* and in *saline constituents* subsequently been determined by expelling at 100 degrees C. the water, which they contained. The juice of the berries was produced by a good iron hand-press, and estimated for its specific gravity, its percentage of grape sugar and its free acid—by customary chemical analytical modes. The free acid of the juice, as below stated, has been calculated as common vine or tartaric acid.

The juice of the berries, which had been

CONCORD GRAPE, 1876.	J'ly 17	J'ly 29	Aug 2	Aug 16	Aug 30	Sep 13	Oct 4
Berries lost moisture at 100 deg. C, per cent.	91.70	91.90	90.06	89.12	84.42	82.52	80.18
Berries left dry matter at 100 deg. C, per cent.	8.30	8.10	9.94	10.88	15.58	17.48	19.82
Per centage of Grape-Sugar in the dry matter of Berries.	7.77	7.72	9.44	18.38	55.33	79.46	81.38
Specific gravity of the Juice.	1.0175	1.0150	1.0290	1.0250	1.0600	1.0670	1.0700
Temperature of the Juice; centigrades.	21°	21°	25°	28°	25°	22°	19°
Percentage of Grape Sugar in the Juice.	0.645	0.625	0.938	2.000	8.62	13.89	16.13
Percentage of free acid in the Juice.	—	2.04	3.525	3.24	1.698	0.778	0.696

collected on the 17th of June, was thin, watery, and like the berries, which yielded it, of a yellowish green color; it turned, however, soon into a *purple* tint, when heated with a slight excess of ammonia or potassium oxide,—revealing thereby the interesting fact, that the substance, which furnished the color of the ripe grape, is already at this early stage in the growth of the grape present, in some concealed form. The purple color of the grapes on the vines made (1876) its first appearance about the middle of August; it showed itself at first in the stems of the berries and passed subsequently rapidly through the outer stronger tissues of the skin; on the 30th of August, the color had already increased to such an exient, that a solution of basic sugar of lead (acetate of lead) produced a purple blue precipitate in the juice. A glance at the above tabular statement cannot fail to show, that towards the end of the second week of August, about the time when the color (purple) made its first appearance in the stems, a remarkable change takes place in the growth of the grape. The *free* acid, which had reached in the juice of the berries its highest amount in the first week of August,—lost fifty per cent. of it by the close of that month, and only one-fifth of it could be noticed at the beginning of October. The grape sugar on the other hand, began about the same time rapidly to increase, when the free acid decreased. The grape sugar increased at a much larger rate,—as will be readily noticed from the above statement,—than the free acid disappeared. To account for the changes in the quantity of the acid in the juice in the various stages of growth—entire berries and the juice obtained from berries of a corresponding state of development were examined, which soon demonstrated the fact, that all the acid contained in the berries—collected on the 2d of August—was present in solution; whilst after that period, the acid to a considerable degree gradually changed into insoluble compounds with lime and potassa, and became thus in crystallinic form distributed throughout the cellular mass, leaving thereby less acid in the juice. The main cause of the gradual reduction of the acid in the juice of the ripening grape consists consequently in a partial change from a soluble into an insoluble form,—and not as has been assumed by Liebig and others at an earlier period of chemical inquiry—in a conversion of the acid into grape sugar. An examination of mineral constituents of the berries during the growth of the grape showed not less remarkable changes in the relative proportion of their essential constituents at different stages, than that of their organic matter had shown, as will be noticed from the following analytical statement:

The Ash of the Concord Grape contained 1876.	July 7	July 17	Aug 18	Sep 13
Potassium oxide.	41.73	47.54	51.14	57.15
Sodium oxide....	5.06	1.13	3.19	4.17
Calcium oxide...	25.03	24.21	16.20	11.30
Magnesium oxide	7.80	not determ.	6.38	3.10
Ferric oxide	0.55	0.75	0.65	0.40
Phosphoric acid..	18.48	21.38	20.77	12.47
Silica and insoluble matter.	1.37	0.43	1.67	11.83

As my investigations are not yet sufficiently advanced to encourage a detailed discussion of the peculiar relation of the ash constituents to the character of the organic portion of the grapes, I confine myself to a mere record of the analytical result. Much credit is due for able assistance in the analytical work to Mr. E. D. Bragg, a graduate of the College of the class of 1875.

March 13*th*, 1878.

Stock Department.

HIDEBOUND.

Hidebound is a phrase often made use of to imply an emaciated condition of the body, which state is often occasioned by a derangement of the digestive and assimilating organs, or it may be the result of feeding on poor provender, or from overwork. In such cases the hair loses its natural gloss, from want of nutrition, the skin becomes unhealthy and scurfy, and feels tight over the body (*hidebound*), which state is produced from absorption of the adipose tissue. Take of Barbadoes aloes one ounce; calomel, one drachm; Jamaica ginger, two drachms; powdered gentian, four drachms. Mix into a mass with a solution of gum, and divide into four pills. One may be given every night and morning until the bowels are sufficiently relaxed. After the animal has recovered from the effects of the cathartic, one of the following powders may be given, mixed in the feed, every night and morning; nux vomica, twenty grains; powdered ginger, one drachm; powdered gentian, one drachm; powdered golden-seal, one drachm; mix. One and one-half drachms of powdered sulphate of iron may be given every day at noon. Feed oats twice a day, and carrots once. In the majority of cases lice are to be attributed to an impoverished state of the system, and a want of proper cleanliness, and it is not improbable that the unhealthy, hidebound appearance is the chief cause of these animal visitors; for they are rarely seen on the body of a healthy animal with clean skin, unless the animal thus affected is kept close to some hen, roost. The treatment most likely to be effective in destroying the lice is, first, to improve the general health by administering medicine as already described. The body may be thoroughly smeared with lard oil and in twenty-four hours afterward the skin should be well washed with soft soap and warm water. Suitable clothing should be provided to prevent the animal from taking cold.—*Ex.*

SOUND ADVICE TO BREEDERS.

A writer in the *Mark Lane Express* of a late date is so eminently sound, that we recommend his remarks as an especial study to breeders:

Finally, then, select, if you can, of the breed that is acclimatized in your district. Strengthen it by an infusion of what blood you find, on study, to suit best; or, if you be imaginative, calculate a cross for yourself. Keep pairing within a narrow circle so long as no symptoms of physical infirmity show themselves. Select continually the best specimens developed, and keep weeding out the weak; so, with ordinary luck, you will do as all other distinguished improvers of stock have done before you, you will justly win a name, you will supply the market with new stuff, and you will fill up your pockets with money—at least, if you cannot thus, you will in no other way. But, in the first instance, do not go too far afield; to begin with, get as high as you can upon the shoulders of the generation before you. Then be plucky, persevering, and prudent.

☞ There are said to be 942 kinds of apples, all traceable to the common crab.

The Farm.

SHRINKING PORK.

If a porker is fatted up quickly the pork is less firm, consequently shrinks more than if the pig was kept in good flesh and thrifty from birth. Where such is the case, I have found that boiled potatoes, pumpkins, &c., mixed with corn meal, bran and provender, are quite as good as where clear condensed food alone was used. To produce firm unshrinking flesh, time must be given, especially with pork. Fat, or meat, produced by forcing quickly, always contains more water than that which accumulates more slowly yet steadily. Where pork shrinks I am led to think that the feeder adopted the quick forcing process, instead of commencing with the younger animal and keeping it thriving.—W. H. WHITE, *in Country Gentleman.*

AMERICAN HOPS.

It is admitted by London brewers that American hops have greater strength, as well as the property of retaining their aroma and bitter principle longer than any other growth. The brewers find that they can get a larger extract out of a smaller quantity.

It is claimed that our hops have not the delicate flavor of finest English and German growths, but it is quite certain that the best growths of American hops are making an exceedingly favorable impression abroad this year, and the day is not far distant when Europe will give our hop growers a remunerative market for their surplus crops.

TRYING TO LIVE WITHOUT WORK.

The following from the pen of Horace Greeley, is true and applicable to this day: "Our people are too widely inclined to shun the quiet ways of productive labor, and try to live and thrive in the crooked paths of speculation and needless traffic. We have deplorably few boys learning trades, with ten times too many anxious to get into business; that is, to devise some scheme whereby they may live without work. Of the journeyman mechanics now at work in this city, we judge that two-thirds were born in Europe; and the disparity is steadily augmenting. One million families are trying to live by selling liquors, tobacco, candy, etc., in our cities, who could be spared therefrom without the slightest public detriment; and if these were transferred to the soil, and set to growing grain, meats, wool, etc., or employed in smelting the metals, or weaving the fabrics for which we are running into debt in Europe, our country would increase its wealth at least twice as fast as now, and there would be far less complaint of dull trade and hard times."

☞ Heaps of corn, *The Nebraska Farmer* says, are nearly as common in the yards of that State as wood-piles at the East, and for the same purpose, to-wit, for fuel. It is on record that Kansas farmers have burned corn, and six months afterward paid 75 cents a bushel for corn to feed their stock. And again, that within one year from the time when corn in that State was a drug at 7 cents the bushel in the field, there was ready market for it at 95 cents. The easy lesson of which is that in years of plenty it is the part of wisdom to provide for possible famine—as Joseph did in Egypt—and not pile corn on the kitchen fire.—*N. Y. Tribune.*

Horticulture.

Written expressly for the Massachusetts Ploughman.

LUSCIOUS RASPBERRIES.

New and Desirable Varieties.

BY E. H. HAINES.

It is pleasant sometimes to notice the expressions of surprise with which some of the new varieties of this fruit are greeted. We do not wonder that visitors are unable to repress their enthusiasm upon first viewing them, as raspberries measuring from two and a half to three and one-fourth inches in circumference, fully deserve such marks of approval. There are other qualities besides their great size that claim attention, and which professional fruit growers have been very quick to notice. Among these qualities, probably those of productiveness and hardiness are the most valuable, though the flavor of the fruit is also an important item. I cannot at this time describe all of the varieties upon my grounds, but will select the following kinds as being specially noteworthy.

RELIANCE.

If this continues in coming years to do as well as during the past six or eight seasons, then we shall feel that any words in its praise that are now bestowed upon it, are justly merited. It is a comparatively new variety and may be

dropped twins. They introduced sheephusbandry about eight years ago, and are well pleased with this new departure thus far.

I have thus, Mr. Editor, given the readers of the *Ploughman* a historic sketch of one of the most remarkable herds of cattle that has ever been bred in Massachusetts. The Anderson brothers and nephew have manifestly been governed by the rule of breeding to and from the best animals, animals that have had in them an inherent *ascertained type*, of such as have come of a *line* that has for long years been carefully bred, regard having always been had to certain characteristic points, until a type has been established, all "misfits" having been carefully eliminated. Thus by patience and skill in this breeding, have animals been moulded, as it were, in the form desired. Their stock is, as I have often thought, the type of *thorough-bred* in the highest and best sense of that word, though their herd is not denominated "thorough-breds." There are animals that are *faulty*, though their pedigree be *faultless*, while there are others whose pedigree is *faulty* according to herd-book records, yet the animals are well nigh faultless, as to form and quality, as determined by the eye and handling. The difference is, that one class of cattle are called "thoroughbreds," and the other should be called as they are, *thorough-bred*. Thus it is that "like produces like" in a high degree of certainty, as is seen not only in the Anderson Brothers' herd, but also in the Welles Brothers' herd—the latter being akin to the former. Both of these herds have produced good milch cows, for they have been bred for milk as well as for grazing purposes.

Having often heard it said that crossbreds —half-bloods,—make just as good milch cows as thoroughbreds, I put this question to Joseph Anderson and his nephew John S., "How do you explain," said I, "this seeming anomaly in the law of heredity, that every plant or animal produces others like itself? Here, for example, the breeder takes a non-descript cow or heifer, commonly called natives; the pedigree of which is entirely unknown to a pedigree bull of the Holstein, Ayrshire, or Jersey breed, all noted as milking breeds, par excellence, and the calf, if a heifer, it is claimed, will make just as good a milch cow as would a heifer dropped by a thorough bred cow of any of those breeds." Neither could an wer the question; nor have I found anybody that can.

In the *American Agriculturist* for March, the editor says in an article on "keeping Pure-bred Stock," "Grades of high character are the most profitable farmer's cows. Experience proves this to be so in every case." This is a strong affirmation—"proved by experience in *every case*;" more than can be said of thoroughbred breeding; because there are failures as every breeder knows, but none in breeding grades, according to the editor of the *American Agriculturist*.

For further consideration of this anomaly in the law of heredity take the Jersey race, known from olden time, as famous for milk. The first cross, a half blood from a well-known factor on one side and a nondescript or "native" so called on the other, and yet it is claimed this half-blood, this "grade," is the most profitable farmer's cow." Let this farmer breed back towards purity of blood, and, according to the aforesaid premises, he does not in anywise increase the productiveness of his cows.

One would naturally infer that if he bred two well-known factors in the milking line—animals that have been bred specially for milk, (Ayrshires for example) and he will get better milch cows than if he bred a well-known factor to a nondescript, for it is claimed, that a grade, the first cross on a "native," makes just as good a milch cow as a thoroughbred. A herd of thoroughbreds and grades was lately sold by auction, and the latter brought higher prices than the former. Such facts seem to set at defiance the cases of hereditary descent. The same superiority is claimed of animals bred for the shambles, to wit, that half-bloods will make more beef and of better quality, in a given time on the same amount of feed, than thoroughbreds. A.

NEW ENGLAND PATENTS.

The following New England patents were passed to issue by the United States Patent Office, March 12th, 1878, and are illustrated and officially announced in No. 11 of the Official Gazette, which was issued March 26th, 1878:—

J. C. Randlett, Portland, Me., improvement in spede purses; J. L. Winslow, Portland, Me., locomotive and fire box boilers; S. Cadwick, Pembroke, Me., burning fuel in metal working furnaces; W. S. Davis, Phillips, Me., pump; O. Adkins, Holden, Me., windmills, B. Saunders, Nashua, N. H., machines for dressing or sizing yarn; F. Twitchell & C. A. Richardson, Nashua, N. H., thread roll for frames for drawing and spinning machines; J. T. Fanning, Manchester, N. H., steam boilers; E. N. Higley, Somersworth, N. H., velocipedes; C. A. Dodge, Middlebury, Vt., washing machine; W. H. Chipman, Boston, Mass., stair carpet pads; S. S. Bailey, Boston, Mass., sleigh standard; M. A. Farrell, Boston, Mass., combined rug and mattress; D. F. Hartford, Boston, Mass., apparatus for grading patterns, H. Hebdon, Boston, Mass., process and apparatus for finishing cloth; R. S. Merrill, Boston, Mass., lamp stands; E. Moore, Boston, Mass., machinery for applying rivets or clasps; J. Nourse, Boston, & J. A. Howe, Ayer, Mass., ploughs; H. Warren, East Boston, Mass., music rack; E. B. Eastland, Cambridge, Mass., needle sharpeners; F. M. Ellms, & J. Mills, Stoughton, Mass., last block fasteners; T. Tripp, East Stoughton, Mass., turbine water wheel; J. W. Calef, North Easton, Mass., washing machine; C. E. Trowbridge, Whitinsville, Mass., spinning ring-; S. M. Allen, Duxbury, Mass., manufacturing of paper pulp from wood; J. E. Watts, Lawrence, Mass., steam or water pressure regulato r; A. C. Hudson, Hingham, Mass., photographic cameras; A. C. Nickerson, Barnstable, Mass., cranberry pickers; H. at ing, & J. B. Carey, Somerville, Mass., nutmeg graters; G. A. Osgood, Stoneham, Mass., heater of shoemaker's tools for finishing soles; F. E. Capron, Providence, R. I., bracelet joints; F. Grinnell, Providence, R. I., sprinkling pipes; A Mesaker, Providence, R. I., buttons; W. H. Hathaway, Pawtucket, R. I., methods of manufacturing tongue pins for jewelry; M. Adler, New Haven, Conn., fire arms; D. Hillard, Middle Haddam, Conn., bell toys; J. C. Stanley, New Hartford, Conn., spinning machines; H. S. Barth lomew, Bristol, Conn., bit stock; W. A. Candee, Middletown, Conn., galvanic electrodes for curative purposes; W. A. Hull, Meriden, Conn., inkstands.

Massachusetts Society for Prevention of Cruelty to An mals.—The annual meeting of the Massachusetts Society for the Prevention of Cruelty to Animals was held Monday, March 24th, at the Society's rooms on Tremont street. The report of the Secretary gives the number of cases investigated at 3710; remedied without prosecution, 1498; not substantiated, 443; not found, 69; convicted, 148; left to avoid arrest, 61; warnings issued, 661; discharged for informality in complaint, 1; pending trial, 3; under investigation, 3; animals killed, 525; taken from work, 565. The total work of the Society since its organization in 1868 shows that 15,389 cases have been investigated and prosecuted; of this number 1364 have resulted in convictions. The animals killed number 1466. Ta en from work, 1895. The treasurer's report gives the receipts for the past year from usual sources $5797,14. Bequests have been received as follows: Eliza Powers, $5000; Thomas Sewall, $1000; Eliza Jenkins, $1500; Jane R. Seaver, $1000; John H. Dexter, $1000; Dr. Moreland in part, $300; total, $9300. A contingent fund of $1000 has also been received, making the total $10,300. The expenses have been $12,018 63. The society has assets as follow; Permanent fund, $10,000; special fund, $1000; in treasury, $3907 20; in Secretary's hands, $256 90; total funds, $15,164 10. Besides this there is due the society from two unsettled estates the sum of $7700. The following were elected Directors: George T. Angell, Russell Sturgis, Jr., D. D. Slade, Geo. Noyes, Mrs. William Appleton, Mrs. J. C. Johnson, Miss Ann Whitesemith, Mrs. D. D. Homans, Miss Florence Lyman, Henry S. Russell, C. L. Heywood, Henry P. Kidder, Samuel E. Sawyer, C. J. F Bayse, W. H. Baldwin, Henry S. Washburn, Abraham Firth, Daniel Needham, John B. Tatt, Greely S. Curtis, Mrs. Samuel C. Cabb, Mrs. John Lowell, Mrs. Joseph Iasigi, Mrs. George L. Chaney, Mrs. J. Elliot Cabot, Mrs. Emily F Newhall, J Murray Forbes, William Howell Reed, Henry B. Hill Boyle J. O'Reilly, Mrs. J. Arthur Beebe. The annual report will be in print and ready for delivery in about two weeks at the Secretary's office.

HAS THE LATE COLD SNAP INJURED THE FRUIT BUDS? Col. Wilder replies: No, not in New England, but he fears for other sections. Gov. Furnas of Brownville, Nebraska, writes him on the 26th: "Pear, peach and apricot in bloom! Never saw such the promise as at present." Mr. Berkmans of Augusta, Ga., of same date wrote: "Our peaches are all in their glory; pears half out in bloom, and everything getting green."

☞ The seeds of plants are their eggs. A sunflower produces 4,000, a poppy 30,000, a tobacco-plant 300,000, and spleenwort 1,000,000. Some, as the sea-pink, have but one seed; umbelliferous flowers two, and the spiurge and ranunculus three. The capsule of the white poppy contains 8000 seeds.

The Ploughman.

BOSTON, SATURDAY, MAR. 30, 1878.

The Legislative Committee on Agriculture visit the State Agricultural College on Friday of the present week.

Damage to fruit buds by the severe frost of Sunday night is reported in a number of the Middle and Southern border States.

The wide destruction of property by conflagrations, almost simultaneous, in Philadelphia and New York, excites unusual attention.

It is believed that a bill reestablishing the income tax will be reported soon to Congress, on the basis of taxing all incomes over two thousand dollars.

It is altogether probable that, while the excessive fisheries award will be paid, the privilege of inshore fishing will have to be negotiated anew, after the six remaining years of the present arrangements.

The vote preliminary to the discussion of the tarriff bill in the House of Representatives at Washington does not indicate any strong determination to revive the tariff at the present session.

The National House of Representatives has voted to print and issue to the farmers of the country 300,000 copies of the Report of the Commissioner of Agriculture, and 25,000 copies of the Report of the Forest Commission.

The Virginia Maffett bell-punch has worked so well in registering taxes for the State on the liquor drank by its citizens, that it is proposed to introduce it into New York as a tax collector. It is proving a great help for the tax payers.

CONGRESS.

The new tariff bill was reported to the House by the Ways and Means Committee, and April 4th was fixed for a consideration of the bill. The Legislative, Executive and Judicial Appropriation bill was reported to the House. The resolution of the Ohio State Grange Patrons of Industry was presented in the Senate, protesting against any reduction of duties on wool and woolen goods. The depredations on the government timber land have given rise to a protracted debate in the Senate. The speech of Senator Howe, of Wisconsin, has been the political feature of the week in Congress. The correspondence on the Fisheries Award it is proposed to refer to the Senate Committee on Foreign Relations. The Internal Revenue Bill is nearly ready to be reported to the House. The Senate pas ed the resolution to extend the bonded term for spirits, and it only awaits the Executive signature. The House Postal Committee has stricken out the section from the postal rate bill which prohibits newspaper publishers from circulating their papers except through the mails. The House voted to distribute 300,000 copies of the Report of the Commissioner of Agriculture. A bill repealing the bankrupt law was reported from the Judiciary Committee to the Senate. It is announced officially to the Treasury Department that sufficient silver bullion is now on hand for coinage purposes for several weeks.

THE LEGISLATURE.

In the Senate, an order was presented authorizing the distribution of 1400 copies of the Report of the Secretary of the Mass., State Board of. Agriculture. The report favorable to the reimbursement of Thomas Cahill was passed in concurrence with the House. The bill for the protection of birds, birds' eggs, deer and game was rejected. The bill concerning the New York and New England Company was engrossed. The vote which engrossed the bill to divide the town of Adams and to incorporate the town of North Adams was reconsidered, for the purpose of making verbal amendments. In the House a bill was reported authorizing the appointment of medical inspectors of schools. The resolve providing for an amendment of the Constitution, to prohibit the alienation of the title of the Commonwealth in the Troy and Greenfield Railroad and Hoosac Tunnel was engrossed by a vote of 173 yeas to 62 nays. The bill to provide for the support of paupers was rejected. Also the bill in relation to naturalization. Also the bill relative to the inspection of factories and public buildings. The resolve concerning labor in State institutions was engrossed. Also the resolve authorizing the Supreme Judicial Court to adjourn to and hold special terms in Fall River.

ENGLAND AND RUSSIA.

Each of these European powers to-day stands ready to fall upon the other. Both are armed for a deadly fight. The war from the first has been really between Russia and England. Turkey has only been the occasion and the circumstance. With Turkey no longer any barrier standing between them. And all the less, in fact, since Turkey secretly assures England that if she and Russia come to arms the Ottoman Empire, or what there is left of it, will not take sides with either, but will remain neutral. The actual points of difference just at present between England and Russia are concerning the holding of the conference, as to what shall legitimately come before it for disposal and settlement. England on her side demands that the treaty of peace between Russia and Turkey shall be submitted in its entirety; but Russia, on the other hand, refuses to submit the whole treaty, although she is understood to express a willingness that the conference itself shall decide what ought to be submitted.

The latter view is the one believed to be taken by Germany and tacitly assented to by Austria. These three powers first arranged the present war, and it is but fair to presume that in a general conference they would decide the terms of a final settlement. And it is because England is afraid that they will vote her down at all points in the conference that she appears to be making ready to assert her claims previous to its meeting. She is doing it with such energy, too, as to make the prospect of a conference at all exceedingly precarious. There may be war before it is assembled; or if it assembles, it may break up with war not less surely. England is arming with all possible energy, and Russia is moving up around Constantinople and establishing a permanent hold on the Bosphorus. Peace between these two powers cannot long be maintained under such circumstances.

It is evident that Russia means to make the most of her present opportunity. Almost any European nation in her situation would do so. England would, and has done it times without number. Power is too sweet to be relinquished, after such immense cost, at the bidding of a rival. Russia is proceeding with caution and still with boldness. She raises no objections to a conference; she admits the right of the conference to discuss all the points of the treaty of peace; but she declines to submit to what may be the decision of the majority at the board. That being the case, of course England has no course left open but to abandon all further ideas of a conference and take her intended redress into her own hands. Especially is she likely to do so since Russia is pressing closer around Constantinople and planting herself on the Bosphorus. By commanding the latter she puts herself in complete possession of the Black Sea, and thus England out altogether. Thus she will be able to send down her armies and their supplies without making the land route through Roumania and possibly encountering Austrian resistance on the way.

It is next to impossible to predict the issue of the existing situation, but it would occasion no surprise whatever if war were to break out between England and Russia on almost any day. Both are on the ground in force, Russia with her army and England with her navy. A single act unpremeditated even may suffice for the spark which will explode the whole of this dangerous mass. Russia no doubt feels that she might just as well have her trouble out with England now as to wait for a few years more to roll round, with the certainty of having her preparations to make all over again. And England on her part has become as deeply stirred by what she deems the duplicity of Russian diplomacy in the matter of this war with Turkey as it is likely that she ever can be. The two black clouds in the European sky are rushing together every day. A crash is to be expected when they meet.

THE SAVINGS BANKS.

The recent feeling of panic among certain classes of depositors in our savings banks has altogether subsided. They have come to their senses again. Every one can now readily see how baseless were the prevailing apprehensions. The sound and well managed institutions are as strong as they ever were, though it is not to be denied that a general and simultaneous run on the banks would inevitably wind up the whole of them. And for the very plain and simple reason that no savings institution can keep the whole amount of its deposits on call and still have it invested where it is earning interest for depositors. One cannot have his cake and eat it too. Investments involve the matter of time, and that is what would wind up the affairs of any savings bank. Contracts outside cannot be broken up as often as a panic among depositors may demand. And it is almost invariably the case that no sooner are frightened depositors put in possession of their money than they are quite ready to bring it back again to the hands from which they have taken it.

The Legislature took timely note of the feeling which had begun to run through the community, and immediately passed a law giving to the Savings Bank Commissioners absolute power to regulate at any time the sums which a bank might be called on to pay out to depositors. Its constitutionality was strongly questioned by astute and able men, the ground taken being that the contract entered into between the depositor and the bank was thereby impaired, in consequence of the former being deprived of his remedy, that is, his right to his deposit on demand. But that objection was overruled, and the bill became at once a law. There is no margin left under its operation for a panic to exist in. It is in the nature of a "stay law," and its effect is to impart immediate confidence. But it will still be essential that the State watch bank management with as close scrutiny as ever, and guard the two hundred and fifty millions of deposits with all its authority.

Farmer's Convention at Shrewsbury, Mass.—Hon Daniel Needham delivered an address at Shrewsbury before a Convention of farmers gathered from Worcester, West Boylston, Grafton, Upton and other towns in Worcester County, on Wednesday the 27th instant. The Convention was held in the town hall and was very largely attended. Hon. Valorous Taft of Upton presided. Col. Needham's address was divided int three parts—The Speculating Farmer—the farmer from necessity and the business farmer. *The Speculating Farmer* was the man who had large means—little or no knowledge of agriculture and wanted his money in expensive buildings and visionary schemes and then complained that farming was unprofitable;—*the farmer from necessity* inherited his farm or was obliged to resort to that occupation, but took no interest in it and made efforts toward lifting himself for its intricate duties;—the *business farmer* methodized his work; drew information from books, fairs, science, mechanics and every avenue of knowledge. Enjoyed his profession and carefully tested well endorsed theories—or theories which commended themselves to his judgment. Had a broad vision and saw, to an extent, the vast field spread out before him and that he as a gleaner, could gather from all science and art something which would contribute to the development of his occupation and his manhood. This man, said Col. Needham, was always a success. The address occupying more than an hour, was listened to with great interest and frequently applauded.

Shutting up Rich People.—It is becoming more and more a question whether what are called insane asylums are established for the care and cure of the really insane, or merely for shutting up people who, while being rich, are also inconveniently in the way of greedy and impatient relations. We know how hard and uncivilized a statement like this sounds, but nevertheless it is warranted by all the circumstances. The instances of incarceration in these retreats, for apparently no better reason than the above, which have recently been brought to light are enough to convince any one that there is a great deal of method in the madness of those who keep mad-houses. A general overhauling of the system of insane asylums seems to be urgently demanded. If innocent persons can suddenly be deprived of their liberty for no other reason than that certain other persons want them out of the way, it must be admitted that it is high time the rule for committals was better understood.

The Late Isaac Rich.—This well known business man, who accumulated large wealth in the fish business in this city and left the greater part of it to the Methodist Church, from the time he became a convert to a religious life resolved to dedicate one-half the profits of his business to the service of God, considering that his Creator was an equal partner with him in all his undertakings. He then possessed but one hundred dollars, but he bestowed fifty of that on the church. This rule he kept up unswervingly. From that time forward he was greatly prospered and he accumulated wealth rapidly. The Lord punctually received an equal share of all that he made. The story is told respecting him that he went to New York and engaged passage for Europe. He was praying for guidance on the morning the ship was to sail, and in some sudden and mysterious manner he was impressed with the fact that he should not take passage in her. Only an hour before she sailed he went on board and removed his baggage, heeding none of the protestations of his friends who sought to clear his mind of superstitious fears. The ship sailed, and was never heard from again.

The New Pope's Policy.—On receiving a number of parish priests, the new Pope, Leo XIII, recommended them to preach Jesus Christ, his life and teachings, and to guard their flocks against the infidelity and immorality so generally prevalent. In all his exhortations he avoids all mention of the Virgin, which is taken to mean that he discontenances Mariolatry, so long encouraged by his immediate predecessor. In his coronation address it was noticeable that he made no allusion to Pius IX, although the cardinal who had just previously addressed him was profuse in his eulogy of the deceased Pontiff. It is universally believed that this omission was not accidental, and he provokes wide and various comment. The atmosphere of the Vatican has perceptibly undergone a change. A new policy, more or less personal in its character, has evidently been mapped out. There is much irritation visible in the popular sentiment respecting it. There is no symptom of accepting the fact of the age in respect to the Papacy, that the divorce of Church and State is a foregone conclusion and reunion is impossible. The new Pope is sixty-eight years of age, and of course is at this period of life so firmly fixed in his purposes that it would be difficult for him to adapt himself to the inevitable that is all around him.

☞ The long established agricultural warehouse of *Parker & Gunnett* presents at the opening of the new season a fullness and variety of seeds, fertilizers, and agricultural implements and machinery that will at once command the widest attention of cultivators. Their advertisement in the present issue of the *Ploughman* sets forth the merits and measure of the immense stock now in store, which they offer to farmers with accompanying inducements of a conclusive kind. We commend a careful scrutiny of their list, and feel confident that it will lead to a personal examination of the numerous articles which it contains. This warehouse exposes to the view of purchasers a perfect museum of what farmers and those at all interested in agricultural pursuits are all the while in request of. It enjoys a very wide reputation and is recognized as one of the foremost among the similar establishments in the country. It almost makes one impatient to go to farming, merely to read over the peerless schedule contained in its attractive advertisement.

Business for Spring.—There is a reviving hope for the Spring trade. The more intelligent journals, that are conversant with commercial matters, do not hesitate to predict that trade is about to show signs of mending, and that if Congress offers no obstructing legislation it will be pretty sure to improve steadily. Confidence is the article that is needed now more than anything else. That cannot be had, however, if the common belief is that everything is to become unstable by legislation. Confidence is requisite to bring forth capital and put it to active service. Nothing is to be done without it. The country is in a good condition to take a long stride in improvement. Its resources are paralleled only by its courage. Should we have good crops for still another season, and a general war in Europe beside, we ought to complain only of ourselves if we do not speedily pick up out of our present condition.

Remonetization.—What effect the remonetization of silver is to have is still more or less problematical, although in the long run there can be little question as to the result. There are conflicting opinions by men all equally capable of giving a judgment. From such good authority as the New York *Shipping List* we learn that, if remonetization is not followed up by inflation legislation, it is likely to have but little effect; and it is not at all improbable that resumption may still be accomplished by the beginning of the next year. The country is great and strong, we are reminded. It is full of courage and resources. It can speedily adjust itself to present conditions. In due time, confidence will return, the various interests will get their right bearings, and all will be well. But Congress must leave matters right where they are.

The Pacific Railroads.—Why is it not time that these two vast corporations should begin to pay off their honest indebtedness, to the Government that set them on their feet especially? They have been beneficiaries of the Government long enough. Now that they are distributing fat dividends, they ought to be seriously thinking about paying back at least the interest on the millions which were advanced to them by the people. The Treasury has so far paid out nearly twenty-five millions of interest on their account, and it is thought right now for Congress to take measures for requiring them to meet their running engagements and pay off arrears. To this end a Sinking Fund has been proposed, to be maintained in a prudent and proper manner, by means of which all obligations of a public nature will be taken care of as they are presented in order of priority. It certainly is time that the Government defined the relation of the roads to itself.

The Mackerel Fishery.—This is a much more important industry to Massachusetts than is generally thought. There are not less than a thousand vessels engaged in the mackerel fishery, having a tonnage amounting to one hundred thousand tons, and employing not less than fifteen thousand men. The cost of his fleet and its appurtenances is estimated at ten millions of dollars. The value of the catch of this fleet has been estimated as high as three millions of dollars annually. The trouble now in the way of the highest success is the practice of taking the fish by seines and trawls, whereby the small fish are taken and the stock depleted. By such means the catch has been very much diminished and the quality has greatly deteriorated. The remedy proposed is prohibiting the taking of them by seines and trawls, and especially in the Spring season. No. 1 mackerel, really such, have to be taken now by hook and line.

Col. Kane's Coaching.—The stir made in social circles in New York by Col. Delancey Kane's deliberately mounting the box of a coach and driving his four-in-hand team daily through the season to Fordham and back, began to lose the larger share of its interest towards the close of the second season, and its abandonment the novel enterprise, now at last announced, was but what was expected. The Colonel owned his coach and horses, and the footing up of his expenses and receipts showed that he had managed to make fair wages of it for the time he served a select public so faithfully. What business the millionaire Colonel will next embark in, of a fancy character, is not understood. There is fox-hunting still open to him on sandy Long Island, or he can take up the business of ploughing during the opening of the present season. This whole incident in social life, interesting as it is for other reasons than its oddity, only shows the unhappy condition of men who can find no career in life for themselves, and so seek to pass it in diversion. But even this palls in time, and we all want to be doing something useful in order to be truly contented and happy.

What a Miser Left.—The love of accumulation may become a passion which a person cannot resist. There was the recent case of the old miser in Cincinnati, who died in destitution though his wealth was to be reckoned by millions. He owned titles to nearly half a million acres of land in different States of the South and West. He owned forty houses in Cincinnati, ten in a single block. He owned nearly a thousand acres of valuable land in Hamilton county, just outside of Cincinnati. He had recently purchased forty thousand acres in Kentucky, worth certainly a hundred thousand dollars; also twelve thousand acres in Iowa, worth twelve dollars and a half per acre. At one time he invested ninety thousand dollars in United State bonds. He paid last year six thousand dollars taxes in Hamilton county alone. He lived in a small township, and he practiced the most rigid economy till he died. His name was Jerry Tullis, and even that will very soon be forgotten.

A Surprising Statement.—The statement of Secretary Sherman, of the Treasury, before the Senate Finance Committee is so unexpected that it attracts the widest attention. He admitted that the passage of the Silver bill had actually strengthened the public credit, and would materially aid him in accomplishing special resumption. He said that the agitation of the subject had created a temporary panic in American securities, but what bonds had so far been sent over to this country had been eagerly taken up here, and the Government is in consequence stronger than ever. He said the Treasury would be ready to resume by July 1st, if the banks were also; he thought, however, that they would not be, yet he asserted that if Congress would let them alone, both the banks and the Treasury would be ready to resume by January 1st. He further stated, in reply to a question, that on and after October 1st. he would be ready to receive legal tenders for customs dues. It is acknowledged that the effect of the foregoing statement of the Secretary is to kill the bill to repeal the Resumption Act.

Music as Medicine.—All sorts of experiments are tried in these times, and one of the latest happens to be one of the most interesting. It was an attempt to soothe a chronic case of insanity, in the Blackwell's Island Asylum of New York, with the application of doses of music, and the result was fully as favorable as could have been hoped for. The subject was a lady who had been confined with mania for nine years. As the different airs were played to her, being changed to act upon her varying condition it was extremely interesting to note the effect upon her nervous system. Being very violent, a funeral march was played, and she immediately became comparatively quiet. A tendency to profanity was checked by playing another selection. "Old Folks at Home" and "Home, Sweet Home" reduced her pulse, moistened her skin, and carried off her nervousness visibly She came from her cell in a straight jacket, and she went back without one. A lady patient afflicted with melancholia received the most striking benefits from this treatment. The conclusions so far drawn from these experiments are, that music tranquilizes the violent, soothes the nervous, and makes the stolidly melancholic chatty, cheerful, or disposed to weep, and that by continuous musical treatment the good effects may be made permanent where they are now but temporary.

Phillips Academy, Andover.—By direction of the Trustees, arrangements have been made to celebrate the completion of the first century of Phillips Academy at Andover, on Wednesday and Thursday, the fifth and sixth of June, 1878.

The grand principles upon which the Academy is founded, the noble work it has done in the cause of liberal education in America, its influence in the founding and shaping of similar institutions, its present prosperity and future growth, all require a commemoration which shall be worthy of this the oldest endowed Academy in the country, and of its long and distinguished roll of Alumni.

The proposed celebration contemplates the collection of manuscript and printed documents relating to the Academy; the increase of the library; additions to the valuable collection of portraits; the rescue of important facts rapidly passing into oblivion; the publication of a general catalogue of officers and students for the entire century; an historic statement of the principles and work of the Academy; the increase of its funds and equipment; and a large home gathering of the alumni at Andover on the days above announced, when an Oration will be given by the Rev. Alexander McKenzie, of the Class of 1855, and a Poem by Oliver Wendell Holmes, M. D., of the Class of 1825, together with numerous addresses by old pupils and distinguished friends of the Academy.

To insure the success of the plan, the Committee will solicit the personal and hearty cooperation of everyone who has been connected with the Academy as pupil, officer, or patron. Rev. F. H. Johnson, of Andover, Mass., is the Secretary of the Committee.—*Norfolk County Gazette.*

READ AND RUN.

— We had a real "cold wave" from the north west, didn't we?

— The Vermont Dairymen's Association held a special meeting at Boston next week.

— The selection of Worcester as the place for holding the next Fair of the New England Agricultural Society suits everybody this year.

— The father of Charley Ross has been telling his sad story to thousands of sympathising listeners in Trumont Temple, this week.

— Attorney General Devens came on from Washington last week to attend the funeral of a life-long friend at Charlestown.

— The abbatoir at Brighton is having a steam whistle adjusted to its works, which is to have a wide and regular hearing.

— The Fat Men have their second annual ball in Boylston Hall, on Friday evening of the current week. The floor will shake some.

— The Kennel Show has attracted a large and constant crowd of visitors.

— According to high commercial authority in New York, there is a somewhat more hopeful feeling as to the immediate future of trade.

— Spring lambs have become the very common talk at the table.

— The usual harbingers of Spring are multiplying on every side. They are bluebirds, robins, ground-birds, blackbirds, trailing arbutus, and such

— Within the past two years, eleven druggists have failed in business in Springfield. No call for drugs up there, it would seem.

— The Turks must by this time have a realising sense of Russia crash.

— The Dominion Parliament has been getting its back up on the subject of lottery swindles.

— Saltpetre is called for in Europe quite as much as wheat and flour. Civilization gets a hoist sometimes with the aid of saltpetre.

— Berkshire was treated to a regular snow storm last week, and the roads had to be broken out for the stage.

— Hon. James A. Bill, of Lyme, Conn., has recently purchased a hundred thousand bushels of ashes in Canada. Farmers ought to know what they are good for.

— A man was found dead in a well in Providence last week, having been there long enough to in part decompose.

— Senator Conkling wears a hat that is disrespectfully compared to a collapsed balloon.

— The Paris Exposition is filling up the passenger lists of our ocean steamers very fast.

— Mrs. Jefferson Davis is a stout lady, with a round face, very popular in Memphis, and often alludes to "our poverty."

— Canada keeps adding to her debt every year instead of diminishing it. It now amounts to $174,370,834, an increase of over $80,000,000 since 1867.

— The millionaire miser who recently died in Cincinnati, from want of food and care, remarked before he died that he only hoped that those who got his money would have as good a time in spending as he had had in accumulating it.

— Gov. Robinson, of New York, has vetoed a bill passed by the Legislature providing that convicted felons may be produced as witnesses in court.

— The Sabbath is called "burglars' day" in New York by one of the journals of that city.

— Minister Bayard Taylor has been getting pretty well dined before leaving for Germany.

— The Russian General Melikoff, who formerly comman ed in Asia Minor, is dead. Typhus fever carried him off.

— The canals are to be declared open a month earlier than usual this Spring, which will have its due influence on the trade of the West.

— Kansas is described as one vast wheatfield, the winter wheat already waving six inches high.

— Te ephones now connect all the police stations of the city.

— The farewell services in the Tabernacle have been held by Moody and Sankey, and the structure is to be taken down in about two months.

— The Boston and Albany depot has been subjected to a thorough course of renovation by cleaning.

— Indian remains have within a few days been discovered in Revere, in the course of making some excavations.

— Ex-Gov Robinson has sent, as his contribution, the sum of fifty dollars to South Killingly Conn., for the purpose of painting the Congregational Church there.

— A young student at the Institute of Technology, belonging in New Hampshire, committed suicide on Wednesday evening of last week.

— There are 88,741 spindles in the Newburyport mills.

— People are beginning to talk about Easter eggs and Easter.

— The fruit buds are pushing their eyes out to see what is going on and if it is not time to come out.

— The Emperor William of Germany reached his eighty-first birthday last week. He is well preserved.

— Connecticut has been looking with a little more care into her divorce laws.

— Justice Clifford, of the Supreme Court of the United States, celebrated his golden wedding anniversary by taking a carriage drive with his wife. It was extremely appropriate.

— The idea of forbidding publishers to send packages of their issues by express has been abandoned by the Post Office Department.

— The capsizing of a British naval vessel last Sunday afternoon, in a squall off the Isle of Wight, resulted in the loss of nearly four hundred lives.

— The rumor of the poisoning of Congressman Leonard in Havana proves without foundation.

— The fact that oxygen and hydrogen could be liquefied was scientifically proved in December last.

— A sealing schooner has arrived home at Stonington, Conn., with forty-nine hundred skins.

— Counterfeit dollars, containing ten grains less than the genuine ones, have been put in circulation. Except in point of weight they are an excellent imitation.

— Springfield has had a sale of pictures, aggregating ten thousand dollars in amount.

— The Fall River nailers have had their wages cut down ten per cent., on and after April 1st.

— Vermont promises to do better than ever with her sugar crop this year.

— They say, out in the blue-grass region of Kentucky, that any attempts of their Eastern editors to collect the debts due them will be violently resisted.

— It is denied that the Fabyan House, in the White Mountains, has changed hands

— The oldest living graduate of Dartmouth College is Mr. Israel P Richardson, who lives in Washington, N. H., and is ninety-three years old.

— They tried an open-car or two on the street railroads here, last Sunday, but they were soon run in for shelter.

— The Republican Publishing Company, of Springfield, has been organized on a capital of $30,000.

— Consumption took 30 of the 132 lives in this city last week.

— The Tuileries at Paris is doomed to disappear before the spirit of the age.

— Everything is fresh and blooming in Washington. They have some six weeks the start of us down there.

— The lawyers in the Vanderbilt will case appear to know just what such a case is for.

— The scales in which the weighing of the silver pieces for the new dollar is done will note the sixty-fourth part of a grain.

— In the New England custom houses, it costs the Government just $38,775.59 to collect just $4,112.39.

— War in Europe is universally believed to be close at hand.

— There are bank troubles also at Worcester.

— It is proposed to increase the number of the Federal Supreme Court Judges to fifteen. Circuit duties are at present almost impossible for the number of judges fairly to perform.

— The tariff question is expected to be opened for discussion in Congress very shortly.

— The dog-show in the city has been one of the interesting events of the week.

— Minnesota is perfecting a plan for the direct shipment of flour to British ports.

— There is an incredible story from India that Nena Sahib is still alive, and a wanderer with two hundred followers.

— Three Molly Maguires exploated their crimes in Pennsylvania on Monday last.

— Damage to the trees and fruit buds by the late cold snap is now the subject of speculation.

— The mill operatives at Fall River have been holding meetings to protest against the reduction of their wages.

— Joaquin Miller and Oliver Wendell Holmes occupied the same box at the Boston Theatre the other evening.

— The Boston & Albany Railroad Company will erect a brick depot near the Providence crossing, this summer.

— The subject of taxing the McKay Sewing Company, whose property foots up $3,700,000 and is in the hands of an Executive Committee, has been before the Committee on Taxation in the Legislature.

— The Home Savings Bank, which was enjoined, will go on with business under the new law.

Massachusetts Charitable Mechanics' Association Invited to give their Exhibition in Worcester.—At a meeting of the Board of Government of the Massachusetts Charitable Mechanic Association March 26th, the following letter was read:

WORCESTER, MASS., March 27, 1878.

To the President of the Massachusetts Charitable Mechanic Association, Boston:

Dear Sir—At a meeting of the Board of Trustees of the Worcester County Mechanics' Association, held March 26th, it was unanimously voted that the President, in behalf of the Association extend a cordial invitation to the Massachusetts Charitable Mechanic Association, Boston, to hold their contemplated exhibition, this season, in the city of Worcester. Should your Association accept this invitation, I beg to assure it, through you, of a generous welcome to the "heart of the Commonwealth," and the willing co-operation of this Association and the mechanics of our city in furthering the objects of your intended exhibition.

Very respectfully yours,
EDWIN T. MARBLE, *President.*

The invitation was appropriately referred, after warm acknowledgments.

☞ *The Sugar Beet in North Carolina* is the title of the Report to the United States Commissioner of Agriculture by A. R. Ledoux, Chemist to the Department, with results of experiments with the Sugar Beet in certain named counties of that State. The author is also Director of the State Experiment and Fertiliser Control Station, at the State University, Chapel Hill. It conveys a large fund of minute information on the subject of cultivating the beet for the purpose of producing sugar.

☞ *The Lawrence Mother Goose*, an oblong affair in covers, furnishes, with its directions, its music, and its excerpts from the versified tales of the classical old lady, all the material for a long and lively evening's entertainment. The instructions for carrying out a successful programme of acting these selected rhymes will be found very minute, and will greatly assist the ingenuity of those undertaking it. The whole is done by E. D. K., and published by Lee & Shepard.

☞ *The Relations between Capital and Labor* in the United States by Joseph Nash, is a prize essay written for the Boston Young Men's Christian Union, and the subject of the first prize awarded by the Union on any subject. It is of permanent interest and evinces marked ability and skill in treatment. It is neatly published in pamphlet form by Lee & Shepard.

A CLOUD OF WITNESSES.

For nearly a quarter of a century Dr. Sage's Catarrh Remedy has been acknowledged by the people as a positive cure for all catarrhal affections. Its great popularity with physicians and patients, together with its constantly increasing sale attests, in arguments stronger than words, its healing power. If there be general or nervous debility or impure vitiated blood, Dr. Pierce's Golden Medical Discovery should be used in connection with the Catarrh Remedy. The following names and extracts are among the thousands who have been *cured of catarrh* by the use of Dr. Sage's Catarrh Remedy:

A. F. Downs, New Geneva, Pa.; D. J. Brown, St. Joseph, Mo.; E. C. Lewis, Rutland, Vt.; Levi Springer, Nettle Lake, Ohio; Chas. Norcrop, North Chesterfield, Me.; Milton Jones, Scriba, N. Y.; J. E. Miller, Bridger Station, Wyo.; J. C. Merriman, Logansport, Ind.; M. M. Post, Logansport, Ind.; J. W. Bailey, Tremont, Pa.; H. R. Agnew, La Porte, Ind.; Jesse M. Lewis, Branch, Ind.; L. Williams, Canton, Mo.; W. A. Thayer, Onarga, Ill.; L. B. Nichols, Jr. Galveston, Tex.; Jesse F. Reinert, Stonesville, Pa.; S. W. Lee, Bloomington, Ill.; Johnson Hollingsworth, Helmick, Ohio; Mrs. M. A. Currey, Trenton, Tenn.; J. G. Joslin, Ke

New Advertisements. | New Advertisements.

MAPES'
Complete & Special Manures,
PREPARED FROM

Peruvian Guano, Pure Fine Bone, dissolv d in Sulphuric Acid Nitrate of Soda, Sulphate of Ammonia, Dried Blood or Flesh, and Po ash Salts.

These Manures are not only composed of materials which **in themselves** rank the **highest** as sources of **plant-food**, but contain them in the proportions which practical experience has demonstrated to be best adapted to the wants and habits of **EACH CROP**. They require no other manure, and improve the condition of the land for subsequent crops.

Truck-growers and Farmers report these Manures to be as effective as the *best stable manure*, and to cost less than half as much.

Analyses and full Directions for Use accompany each Package.

Mapes' Corn Manure.
Ammonia 4.00 to 5 per cent., Phosphoric Acid 10 to 12, Potash 6 to 7.
For 10 bushels shelled corn, use 3 bags, 600 lbs.
" 15 " " " 4 " 1,000 "
Price per ton, $40.50—per bag (200 lbs.), $5.20.

Potato Manure (Ville Formula).
Ammonia 4.36 per cent., Phos. Acid 5.97, Potash 13.64.
For 20 bushels Potatoes use 2 bags, 400 lbs.
" 30 " " " 3 " 600 "
Price per ton, $34.94—per bag (200 lbs.), $4.40.

Mapes Grass and Grain Spring Top-Dressing.
Use one or two bags per acre for top-dressing winter grain or grass fields—also for hoed crops in hills or rows for producing rapid growth.
Price per ton, $40—per bag (200 lbs.), $5.35.

Mapes Complete Manure.
Ammonia 4 to 5, Phos. Acid 10 to 12, Potash 3 to 4.
A general manure—a substitute for stable-manure—especially adapted for grain crops and grass lands—cheaper and more Phos. Acid than Potash.
Price per ton, $40—per bag (200 lbs.), $5.25.

Complete Manure (Ville Formula).
Ammonia 7.60, Phos. Acid 8, Potash 7.00.
For use the same as the above, but adapted more particularly to light lands, or such as require more Potash than Phosphoric Acid.
Price per ton, $42.25—per bag (200 lbs.), $5.50.

Mapes' Beet and Mangold Manure.
Price per ton, $42—per bag (200 lbs.), $5.45.

Mapes' Fruit and Vine Manure.
For Trees of all kinds, Small Fruits, Strawberries, etc.
Price per ton, $35—per bag (200 lbs.), $3.70.

Mapes' Cauliflower and Cabbage Manure.
Price per ton, $40—per bag (200 lbs.), $5.10.

Mapes' Lawn Top-Dressing.
For Lawns, Croquet Grounds, Grass Plats, etc., 100 lbs. for ,500 sq. feet.
Price per ton, $80—per bag (200 lbs.), $6.30.

Mapes' Spring Wheat Manure.
Very quick in its action—a complete Manure for Spring Wheat,
Price per ton, $50—per bag (200 lbs.), $5.35.

Mapes' Fodder Corn Manure.
Price per ton, $40—per bag (200 lbs.), $5.15.

The above prices *include cartage, excepting when total quantity ordered is less than half a ton*, then add $2.50 per ton for cartage.

Address
THE MAPES FORMULA & PERUVIAN GUANO CO., 158 Front St., N. Y.

mch30-13t

RANDALL & BRAMER
PULVERIZING HARROW.

A ROTARY, VERTICAL PLATE WHEEL HARROW.

ITS VALUE ESTABLISHED BY ABORTIVE IMITATIONS.

IT HAS NO EQUAL!

Economizing Time! Saving Labor and Money! Securing the Largest Crops!

No Wonder there are Over 10,000 in Use!

To meet the growing demand and various wants OF THE FARMERS throughout the country, **10** different sizes and styles of this unequaled implement FOR THOROUGHLY PULVERIZING THE SOIL are made.

IT IS THE ONLY PRACTICAL JOINT WHEEL HARROW made. Can be changed from a leveled to a stiff harrow at the pleasure of the operator, in a moment's time, and does not INVOLVE A LAWSUIT FOR INFRINGEMENT OF PATENTS to the seller or purchaser, as is the case in all other Harrows. *Agents wanted.* Send for Descriptive Circular to

WARRIOR MOWER CO., Little Falls, N. Y.

E. E. LUMMUS & CO., 32 South Market St., Boston, Mass. mh30-2t*

CHOICE BUTTER,
THE COOLEY SYSTEM

Bids fair to supersede all other methods for setting milk for making

Butter and Cheese,

producing more and of finer quality.

From Massachusetts Agricultural College Farm:
AMHERST, Mass., Feb. 9, 1878
VERMONT FARM MACHINE CO., Bellows Falls, Vt.
GENTS: We are well pleased with the Cooley Creamer that I feel bound to say a word in its favor. It takes from 25 to 30 per cent. more cream, and the yield of butter is wonderful. I have cheerfully recommended it to the Japanese government above all other creamers. Yours respectfully,
A. A. SOUTHWICK, Farm Supt.

GOLDEN FARM, NEWPORT, R. I., Feb. 7, 1878.
GENTLEMEN:—We have thoroughly tested the cans you sent us, and find that we lead of you fully, and shall use none but that system in preference to that employed by us. Waiting in future your favors, we remain, Truly yours,
MELVILLE BULL.

Send sample circulars to

VERMONT FARM MACHINE CO.,
Bellows Falls, Vt.

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PEARCE'S IMPROVED BROADCAST
SEED SOWER,
Sows all kinds of Grain & Grass Seed.
No more sowing too much to the left. Small gate for Clover seed. Sows 4 to 8 acres per hour. Does better work than can be done by any other hand machine. Only $5. Sold everywhere, or sent by express. Address
Goodell Company, Antrim, N. H., Sole Manufacturers. mh30-3t

Plymouth Rock Fowls.

PURE YOUNG STOCK FOWLS. PLYMOUTH ROCK FOWLS. Price $30. Trio, for Eggs, same variety, $5 per 13, $1.50.
FINE YOUNG COWS, soon to calve.
Address B. PRATT, Gardener, mh30-2* Salisbury St., Worcester, Mass.

Plymouth Rocks & Lt. Brahmas
A SPECIALTY.

I AM prepared to furnish Eggs from choice stock of these varieties, for $1.20 per setting, two settings, $2.00, five settings, $3.00.
J. S. ALLEN,
mh30-4* Gloucester, Mass.

EVERGREENS
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To all persons interested in the Estate of MAVE-RICK WYMAN, late of Acton, in said County, deceased. Greeting:
WHEREAS, DANIEL WETHERBEE, the Executor of the will of said deceased, has presented for allowance the first account of his administration upon the estate of said deceased.
You are hereby cited to appear at a Probate Court, to be holden at Cambridge, in said County, on the fourth Tuesday of April next, at nine o'clock in the forenoon, to show cause, if any you have, why the same should not be allowed.
And said executor is ordered to serve this citation by publishing the same once a week in the Massachusetts Ploughman, a newspaper printed at Boston, three weeks successively, the last publication to be thirty days at least before said Court.
Witness GEORGE M. BROOKS, Esquire, Judge of our said Court, this twenty-sixth day of March, in the year of our Lord one thousand eight hundred and seventy-eight.
J. H. TYLER, Register.

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1876.

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DARLING'S
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OUR STEAMED GROUND BONE

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BONE MEAL for Feeding Cattle, CRACKED BONE, WHEAT, BLOOD and BEEF SCRAPS, for feeding Hens and Hogs.

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One, Two and Three Horse.
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With one Two-Horse Power, and Thresher with Iron Orlinder, 350 to 400 Bushels of Oats, or 200 to 250 Bushels of Shelled Corn, or Three Cords of Wood in one day. Our DRAG SAW will cut 50 Cords 16-inch Rock Maple Wood, and our CIRCULAR SAWS 125 Cords of the same kind of Wood in a Day.

Was awarded at the New England Agricultural Trial Sept. 5 to 7, at Portland, Maine, FIRST PREMIUM and **SILVER MEDAL**, over three competitors.

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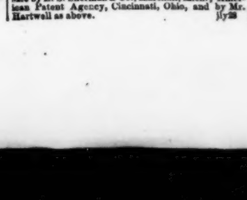

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Seeds, &c.

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We offer for Spring of 1878, the largest and most complete stock in the U. S., of
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Ornamental Trees & Shrubs, deciduous and evergreen.
Roses a specialty—all the finest sorts.
Green & Hot House Plants, including best Novelties.
Descriptive and Illustrated priced Catalogues sent prepaid to Customers, **free**, to others, on receipt of stamps as follows:
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Asters, in great variety; Amaranthus; Alyssum, Balsams, Cobics, Everlast

The Poet's Corner.

A SPRING BOUQUET.

Rails the rude Wind-king through the surging sea
Of swaying boughs, that bending to the blast
Their countless arms, with murmurous rustling wave,
In wood and forest; and the hedgerows burst
Into the tender greenery of Spring.

Now show the clumps of golden crocuses
Their crowns above the freshly-scented mold;
And quavering bells of snowdrops glimmer white
In roadside garden; purple violets
Lurk 'mid their green leaves, heavy-eyed with dew,
Their fragrant perfume scattering on the Dawn.

The polyanthus in her velvet robe—
Yellow and russet—nestles by the side
Of proud auricula; the splendid stars
Of periwinkle—palest lavender—
Gleam from the lvied bank; ranunculus
All stately queens it o'er her satellites,
The yellow daffodils; narcissus scents
With his frankincense sweet, the keen March air
A flower of peerless beauty.

Wall-flowers show
From bed and border, their brown orange blooms;
And under them lingereth a vestal pure,
The last pale primrose. All the pear trees bend
Beneath their flower-snow; the almonds blush
With roseate bloom; the young year's minstrel sweet—
The mellow thrush—his liquid carol pours
From the old blackthorn.

Nature is astir;
She wakes rejoicing from her Winter sleep,
And with a thousand voices welcomes Spring!

—*Chambers's Journal.*

Ladies' Department.

A WORD IN SEASON.

The Day Accommodation on the Shore Line was making its deliberate way eastward, curving with every curve of the Connecticut shore, and clinging to the water-side as though actuated by a sentiment for coast scenery. On one side of the track lay the blue, white-capped sea; on the other, low rolling hills with foregrounds of brown meadow and golden sedge; over all, a superb arch of sun-lit sky. It was a delicious late autumn day, and Miss Mallows found *That Husband of Mine* so little engrossing—perhaps because of her maidenly unacquaintance with the possessive case of that article—that she flung it down and betook herself to gazing from the window. She was growing dreamy, as gazers at a rapidly changing scene are apt to do, when a word reached her ear, and aroused curiosity enough to make her turn her head. It was a woman's name, and an uncommon one—"Arethusa."

The person who uttered it was a man. His seat was on the opposite side of the car, and a little in advance of that which Miss Mallows herself occupied, and she now observed that there was something odd about his appearance. His head and shoulders were massive and finely formed; his face seen in profile was a good one, with kindly eyes and a striking forehead, broad and benevolent. But there was something wofully ish in his attitude, and when presently he half rose to shut the window, it became apparent that he was a dwarf. There was no deformity, but the large head and broad shoulders were balanced by a miserable pair of little legs not longer than those of a child of ten. He was not young, for there were grizzled hairs about his temples and in his full beard, and altogether his appearance was half repulsive and half attractive, and awoke a feeling compounded of good-will and pity so strangely mingled that it was hard to tell which predominated.

His companion—evidently the "Arethusa" addressed, was a girl not over twenty, of that delicate type of prettiness known as "American," which fades so early, but is charming in its brief flower-time. Her new gray suit, with crepe lisse ruffles at throat and wrist, the crisp feather in her hat, even the shining red leather of her travelling bag, and the perfectly fresh, carefully put-on gloves, bespoke the bride, but there was something very unbridal in the face which these fineries surrounded. The eyes, blue in tint and beautifully shaped and set, were swollen with crying, the lips quivered nervously, every vestige of color had fled from the round childish cheeks, and the hands in the new gloves were pinched together with a tightness like terror. Once or twice as Miss Mallows watched, she fought with emotion and called up a wan little smile in answer to something said to her, but she never spoke. Her companion, on the contrary, talked incessantly in a low-voiced steady strain. Miss Mallows could catch only a word now and then, and her curiosity about the couple grew so strong that she felt that she would pay any price to know their story. There could be no doubt as to their relation, she thought; they were husband and wife, and just married. The little man evidently had no thought except for his bride. Mile after mile he talked and talked, devouring her with his eyes the while, and she sat with half-averted head, never meeting his gaze or replying by a word to any thing he said. Once she turned and looked full at Miss Mallows with a wild appeal in her face which was startling, but she instantly looked away, and presently laid her arm on the window-sill and her head on her arm, and began to cry in a still, dreadful manner, not sobbing aloud, but trembling all over with a pent-up feeling which was worse than outbreak. The man tried in vain to soothe her; she repelled him gently but decidedly, and at last he gave up the attempt, and silently sat beside her with a grave, troubled face.

"I shall *die* if I can't find out about those people," thought the excited observer on the other side of the car. But she didn't die, neither could she find out. The can not walk up to perfect strangers and demand, "Your story or your life!"—it is impossible. So Miss Mallows sat still, her conjectures aflame and her fingers fairly twitching with impatience, till at last the train stopped at a small-way station, and the little man, rising from his seat—and, alas! looking even shorter than when he sat, said, in a gentle, deprecatory tone, "Now, Arethusa."

With that they vanished. Miss Mallows had one more glimpse of them, getting into a brand-new carry-all, which looked as though it might be a part of the wedding outfit, and then the train bore her away. Her thoughts remained behind, with the people in whom she had taken so sudden and violent an interest."

"I wonder, wonder, who they are, and why on earth she married him?" ran her reflections. "So young and pretty, and so evidently unhappy! And for all her prettiness, it wasn't an educated face, or a lady's—he looked far *nicer* than she. I feel exactly as though I had dipped into the middle chapter of an exciting novel, and then somebody had taken away the book. What wouldn't I give to read the beginning and end of it! *That Husband of Mine*, indeed! Stupid wretch!" And she gave the volume a vicious little knock. "How is one to endure such twaddle, when *really* interesting things like this are happening in real life all the time? Let me see—where was it that those people got out?" consulting her ticket. "Upham Corners—that is only ten, eleven, thirteen miles from Patunxet. Perhaps Margaret Lenox may know something of them. I'll ask her."

Felicia—I am tired of calling her Miss Mallows, which name, besides, seems to belie her frank, impulsive nature—had her desire gratified sooner than she had dared to hope.

Mr. Lenox was late to tea that night, and explained the fact by saying, "I went four miles out of my road to see David Dalrymple's new steam-thresher, and, behold, when I got there, it was locked up, and he away with the key in his pocket. And what do you think, Margaret?—he had gone to be married!"

"Not really?"

"Really. I tried to pump old Sally as to the age and antecedents of the bride, but she was taken deaf at once, and not a word could I extract. Master David had told her to have a good fire and boil a ham, and she'd got a good fire and she'd boiled the ham—that was all; and she wasn't one to ask questions about things as didn't consarn her. Then she pinched her lips tight and began to poke the fire; and as it struck me that the remark about things which didn't 'consarn' people was meant to be personal, I gave it up and came away."

"Oh dear! what dreadful woman do you suppose has pounced on that poor little David? An old maid, of course, or some harpy of a widow."

"I can't say as to that, but I imagine she's good-looking, and that David is in love with her."

"Dear, what makes you think that?"

"O, because of the pains he has taken about the house. Lots of new furniture, and everything redded up. He's bought a carry-all, Sally said."

"Who is this person that you are talking about?" asked Felicia.

"A neighbor of ours—seven miles off, to be sure, but that counts as neighborhood in the country. Such a nice, clever man, Felicia, a good farmer too, and thoroughly respectable in every way; but, poor fellow! so unfortunate in his appearance—a dwarf almost, with the head and shoulders of a grown person, and stunted legs no bigger than a child's."

"Oh!" almost shrieked Miss Mallows, "that must be my little man in the car. I came all the way from New Haven with him and his bride," and she plunged into a description which left Mrs. Lenox as much excited as her friend.

"I must see her!" she cried. "We'll drive over in a day or two."

Weather was unpropitious, however, and the day or two proved nearly a fortnight. Mrs. Lenox had a double errand, being provided with a basketful of Zonale geraniums to be exchanged for cuttings from old Sally's famous chrysanthemums; but when, after knocking a long time at the seldom-used front-door of the farm-house, they made their way round to the kitchen, and from thence to the family sitting-room, no one was visible, and the fireless hearth and neatly piled books and papers on the table made it evident that the apartment had not been used of late. While they lingered and wondered, a creaking step came down the stairs, and old Sally, with a tea-cup in her hand, entered the room. She saluted the ladies grimly.

"Thank ye, Miss Lenox. I'd like the geraniums well enough if I'd time to tew round with 'em, but just now my hands is full, without taking care of plants, a-nussing Miss Dalrymple."

"Mr. Dalrymple's wife? Is she ill?"

"Yes, she is and she ain't. 'Tain't no pertikilar kind of sickness as I can see; but she's weak as water, and looks bad. I give her pennyroyal when she fust come, thinkin' it might be she'd ketched an inside cold on the journey; but it didn't do no good, and she kep' on not eatin' nothin' and gettin' more and more peakin', till finally she took to her bed, and to-day Mr. David's gone over for the doctor. He set up with her last night. She didn't want him to, but he said he shouldn't sleep anyhow, and he'd ruther. It don't seem as if it need take up any time a-waitin' on her, for she don't ask for anything from day's end to day's end; but sickness takes steps any way you fix it, and I hain't done much except go up stairs and down again these four days."

"Dear me!" began Mrs. Lennox. But Felicia, moved by an impulse, broke in.

"I think I must have come in on the same train with Mrs. Dalrymple. I wonder if I might go up and see her?"

Rather to her surprise, Sally made no objection.

"She hain't *said* she wouldn't see nobody, and mebbe it'll rouse her up a bit," was her ultimatum, and Miss Mallows ran across the meadow and golden sedge; over all, a superb arch of sun-lit sky. It was a delicious late autumn day, and Miss Mallows found *That Husband of Mine* so little engrossing—perhaps because of her maidenly unacquaintance with the possessive case of that article—that she flung it down and betook herself to gazing from the window. She was growing dreamy, as gazers at a rapidly changing scene are apt to do, when a word reached her ear, and aroused curiosity enough to make her turn her head. It was a woman's name, and an uncommon one—"Arethusa."

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